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B4X 1A 1B
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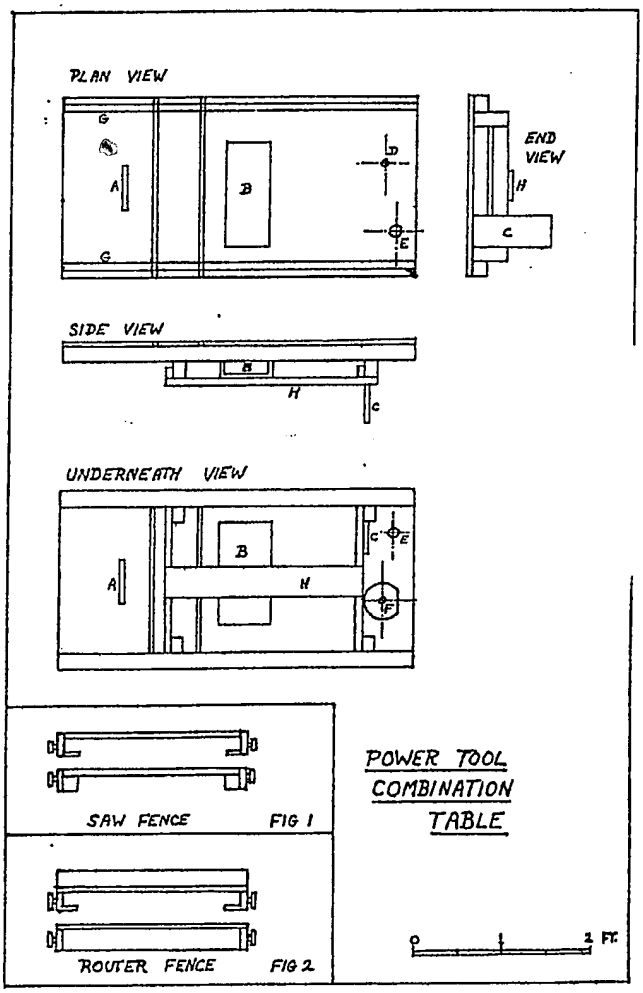
(56) Documents cited
GB A 2096522
GB A 2056899
GB 1602975
GB 1573557
GB 1551203
GB 1529642
GB 1529177

(58) Field of search
B4X
B5L

(54) Power tool combination table

(57) A portable working height platform to which the popular range of power tools can be secured in such a way as to enable a wide range of accurate woodmachining operations to be carried out with the aid of sliding fences and scales G. Accommodation is provided for a circular saw, router, drum and disc sanders and a range of drill attachments with the facility of other power tool combinations as bolt on attachments. The power tools are spaced about the table (positions A,B,D,E) to allow each to work independently of another without crowding or interference and are connected through a main power strip with a single isolating switch enabling all power to be shut off at anytime.



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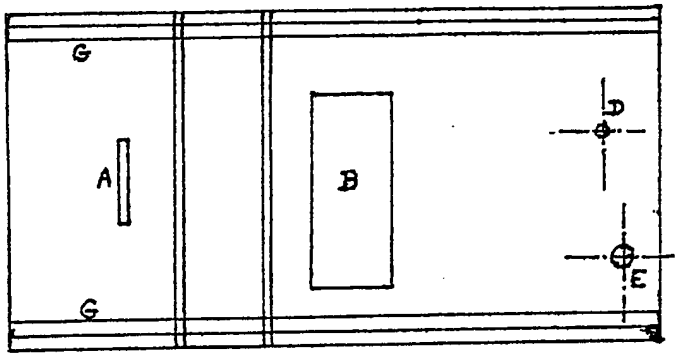
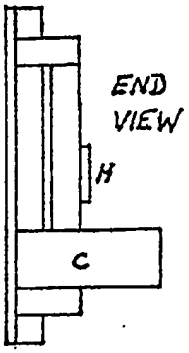
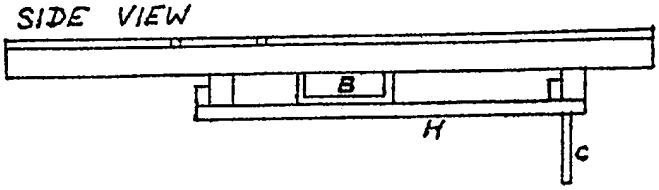
PLAN VIEW

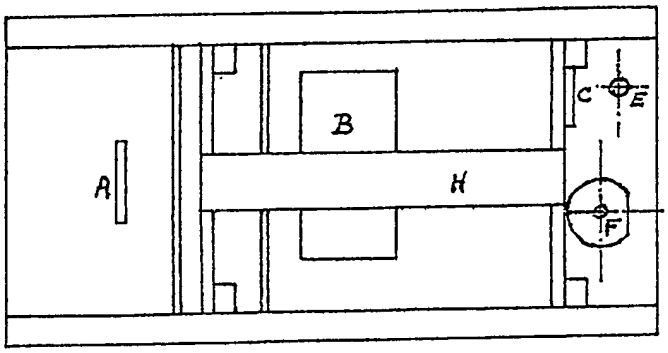


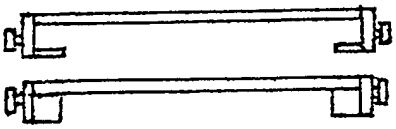


SIDE VIEW

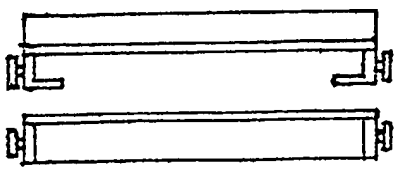


UNDERNEATH VIEW



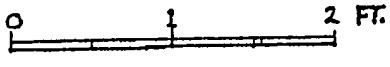


SAW FENCE FIG 1



ROUTER FENCE FIG 2

POWER TOOL COMBINATION TABLE



SPECIFICATION

Power tool combination table

General description

The Power Tool Combination Table is designed for the "do-it-yourself" woodwork enthusiast to carry out home improvements and to manufacture items of furniture and wooden toys. The table is a working height platform to which the popular range of power tools can be secured. A circular saw, disc and drum sanders, plunging router and other electric drill accessories are housed in such a way that they can each be set up to give their optimum performance and left in place without interfering with the function of the others.

Background

The phenomenal growth in power tool sales in recent years has led to the present situation where few households are without at least an electric drill and it's attendant accessories. A large number have a power saw and a sander in addition and the recent introduction of a moderately priced router has increased the handy-man's inventory of power tools still further. There is therefore a clear need for a moderately priced combination table that can house existing popular power tools so that they can perform most of the functions that can only currently be obtained from the expensive custom built combination machines such as the Woodman M1A6 and the Kity K5 (RTM).

Detailed description

The table measures 4' × 2' and has been designed to fit into a Black and Decker Workmate (RTM) (by means of clamp board H) so that it can be stowed away when not in use. It could, however, be provided with it's own removable, folding or fixed legs. The construction of the prototype is almost entirely of wood but would be more ideally cast in a light alloy if it were to be mass produced.

Two sliding fences are provided (Figure 1 and Figure 2). Each fence is reversible, can slide the full length of the table and can be securely locked in any position. Scales (G) are fitted along the full length on each side of the table, calibrated from one end at zero for the circular saw, and at zero from the other end for the router. This enables quick and accurate settings to be applied.

Circular saw

A 5" Black and Decker (RTM) Circular Saw is fitted in one end of the table. Four holes are drilled in the faceplate of the machine to secure it to the underside of the table. The Slot (A) in the table is wide enough for the sawblade guard to remain operable. Two sawguides are provided which operate in two grooves running across the table, thus enabling accurate 90° or angled cuts to be made as in a conventional power saw table. Large sheets of plywood etc. can easily be sawn using the full area of the table top.

Disc sander

A Black and Decker horizontal drill stand is fitted in a recess (B) in the centre of the table at the optimum depth for a disc sander attachment to be used. The drill stand does not protrude above the working surface of the table so that when the drill is removed there is no interference to the operation of the sliding fences. An attachment can be provided that can be easily secured at 90° to the disc to enable accurate right angles to be obtained.

Drum sander

A second drill stand (C) is fitted vertically below the table at the opposite end to the circular saw. A hole (E) has been cut in the table top to enable a drum sander fitted to an electric drill to protrude above the working surface. Other drill accessories, such as the Barrus (RTM) shaper cutters, can also be used in this position.

Router

The prototype table is fitted with a Bosch POF 50 (RTM) plunging router but other makes could just as easily be adapted for use in the same way. To minimise the loss of cutting depth, the underside of the table has been recessed (F) to take the baseplate of the router. Existing tapped holes in the router baseplate are utilised for securing the router to the table. A wide range of functions can be performed by the router when used in this way – grooving, slotting, rabbeting, edge moulding, mortising and tenoning. All can be carried out quickly and accurately in conjunction with the large sliding fence. Depth of cut can be easily adjusted using the depth indicator fitted to the router.

Power supply and safety

Each machine is operated by it's own switching mechanism. Additional safety could be provided by having all machines plugged into a quadruple socket fitted underneath the table. One power cable would feed this socket from the power source. Emergency stop switches, fitted to each end of the table could be wired in to this power supply thus enabling power to be instantly isolated to all machines.

Exploitation in industry

The Power Tool Combination Table could be manufactured by any of the major Power Tool companies to house their own range of power tools.

Key Plan

A – Slot for saw
B – Recess for disc sander
C – Base for drill stand
D – ¾" hole for router
E – 2½" hole for drum sander
F – Recess for router
G – Scales
H – Clamp board

CLAIMS

1. A power tool combination table comprising of a working height platform fitted with clamping

arrangements that can secure the popular range of hand held power tools in such a way as to allow each to work independently of another without interference and to perform quality woodworking tasks with the aid of two independent guide fences in conjunction with scales fitted at both sides along the full length of the table.

2. A power tool combination table as claimed in claim 1 that houses a circular saw, router, drum and disc sanders and a range of drill attachments with the facility of other power tool combinations as bolt on attachments.

3. A power tool combination table as claimed in claim 1 or claim 2 in which all the power tools join the unit from the underneath and are connected through a main power strip fitted with a single isolating switch to enable all power to be shut off at anytime.

4. A power tool combination table, as claimed in any preceding claim, of portable design either fitted with a clamp board for securing in a vice (eg Black and Decker Workmate (RTM)) or provided with its own folding legs.

5. A power tool combination table as claimed in any preceding claim that is of simple construction and low unit cost.

6. A power tool combination table substantially as described herein with reference to the accompanying drawing.

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